

MAINE STATE SCHOOL BUS PURCHASE PROGRAM

SCHOOL BUS SPECIFICATIONS

84 PASSENGER CONVENTIONAL TYPE D

SCOPE: The Department of Education will be setting up contracts for Type D School Buses for all school units to purchase from. The Contract term will be 7/1/2012 to 6/30/2013. School Units will be contacting the awarded vendor with their orders throughout this time period.

NOTE: All School Buses as supplied must meet or exceed all relevant FMVSS, State of Maine School Bus Standards (DOE rules Chapter 81), State of Maine School Bus Inspection standards and meet or exceed the exhaust emission standards in Title 13, California Code of Regulations Section 1956.8. In accordance with the Maine Department of Environmental Protection rules Chapter 127, New Motor Vehicle Emission Standards, all new school buses purchased in Maine and equipped with a heavy-duty diesel engine (HDDE), must be certified to meet or exceed California emissions standards. For the purpose of this rule, HDDE is defined as a GVW rating of 14001 pounds or greater. Purchase preference will be encouraged for best emissions performance. In accordance with Title 38 MRSA section 1665-A, all school buses manufactured after January 1, 2003 can not be equipped with mercury containing switches or components.

LEAD FREE WHEEL WEIGHTS: TO HELP REDUCE THE NEGATIVE IMPACT ON HUMAN HEALTH AND THE NATURAL ENVIRONMENT WE REQUIRE THAT ALL VEHICLES PURCHASED ON THIS ORDER TO BE DELIVERED WITHOUT LEAD WHEEL WEIGHTS..

I. State Purchasing of Safer Alternatives

The State of Maine shall continue its commitment to environmentally preferable procurement so as to purchase products and contract for services that have a reduced negative impact on human health and the natural environment in comparison to other products and services that serve similar purposes. To that end, the State shall carry on its efforts to seek ways to increase the acquisition of such products and services to the extent feasible, balancing price, performance, availability, and safety.

In carrying out this commitment, the Department of Administrative and Financial Services (DAFS), the Division of Purchases, and the Department of Transportation (DOT) in cooperation with other executive branch agencies, shall avoid products and services that contain, use or release chemicals that are PBTs (persistent, bioaccumulative and toxic chemicals) or carcinogens whenever safer alternatives are available, effective and affordable.

II. Heavy Duty:

- Lead wheel weights will not be accepted
- Prefer liquid balancer KTP tire treatment or approved equal.

NOTE: All School Buses as supplied must meet or exceed all relevant FMVSS, State of Maine School Bus Standards (DOE rules Chapter 81), State of Maine School Bus Inspection standards.

SPECIFICATIONS

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AIR CLEANER:	Standard, per OEM.
ALTERNATOR:	160 AMP Minimum
AXLE, FRONT:	Min. 10,000 lbs. OEM standard, with 40-45 degree turning radius, parabolic front springs or equivalent & oil bath hubs w/soft ride or equivalent as standard equipment. Springs to be manufacturer's recommendation consistent with axle capacity.
AXLE, REAR:	Certified for body configuration and capacity; Minimum 21,000 for >84P; single speed only. (Heavy Duty capacity as options)
AXLE, REAR RATIO:	Manufacturers recommendation for range of service specified by district and for optimal performance of engine.
BATTERIES:	Set of two (2) or three (3), 104 AMP 12 Volts; Min. 1850 CCA combined rating. Battery system must be sized with sufficient reserve to allow operation of the 8-way warning light system for at least 15 minutes at 0 degrees Fahrenheit without the engine operating and still restart the engine. See also, electrical service requirement for wheelchair lift equipped buses. (HD Battery Package as an option)
BRAKES:	Dual full air with heated air dryer, automatic slack adjusters (Hydraulic-option)
ENGINE:	Diesel Engine, rated at min. 190 H.P. for 72P or less and 205 HP for buses with design capacity of 77P or more. Torque rating min. of 520 ft. lbs. (Or manufacturers recommendation for application or service as defined by the district as an option). Engine to be full electronic control with electric high idle, cruise control and viscous fan drive, full flow oil filter; accessories to include fuel/water separator with heater; -40 <u>Extended Life Antifreeze</u> , 750 watt block heater with recessed receptacle in front bumper. Documentation of EPA/CARB rated emissions performance is required for all engines as bid. (Full on/full off fan as an option. Auto radiator shutters as an option. Increased H.P. engine options)
EXHAUST SYSTEM:	Full length tail pipe, aluminized, (stainless as an option) with rear exit (left side exit in compliance with State of Maine Rules, Chapter 081 as an option).
FRAME:	Manufacturer must certify frame dimensions and bending strength to body size and configurations.
FUEL TANK:	60 gals. Minimum, with locking access door. High capacity fuel tank option.

HORN:	Dual, electric
IGNITION:	Diesel Standard
INSTRUMENTS:	Speedometer, odometer, fuel, hour meter, oil pressure, water temperature, Low pressure warning light and buzzer for dual brake system, tachometer, voltmeter or ammeter, Engine warning light and buzzer for low oil pressure or high engine temperature, Directionals, transmission temperature gauge or bid mfg. recommendation, Clock. (Air filter minder option. Low oil indicator option.)
OIL FILTER:	Full Flow
SHOCK ABSORBERS:	Heavy Duty, dual action rated to each axle
STEERING:	Full Power, Tilt Std. (Telescoping column w/air or hydraulic brakes, as options)
SUSPENSION SPRINGS:	Soft ride or equivalent. Front-as recommended, 2-leaf parabolic or equivalent. Rear, parabolic or mfg. recommendation. (Air Ride as an option) Manufacturers' standard with hydraulic brake option.
TIRES:	Six tires, 11.00R/22.5 14 ply, tubeless Front & Rear highway tread; Full rated. Tires provided installed. (Rear M&S tread as an option. Spare tire as an option.)
TOW HOOKS:	Two each, Front and Rear
TRANSMISSION:	Five speed, automatic, electronic; Allison PTS 2500 transmission or equivalent with external spin on filter, as standard equipment. Synthetic fluid required. Fluid type must meet manufactures specifications as contained in extended warrantee requirements. (manual transmission as an option. Other optional transmissions as specified by the manufacturer to match optional engine torque ratings).
UNDERCOATING:	Petroleum or wax base
WHEELBASE:	276 inches minimum for 78P or greater.(Note: body length and floor plan must provide for at least minimum FMVSS seat spacing.
WHEELS:	Hub piloted. Set of 6, 22.5x8.25 wheel size. Spare Wheel as an option.

YEAR, CURRENT MODEL: Bid must specify model year.

COMMENTS: _____

BODY SPECIFICATIONS:

AIR FOIL, REAR ROOF	Bid manufacturer's recommendation installed. May not interfere with visibility of warning lights or roof strobe.
BACK UP ALARM:	Included. Must comply with published Back up Alarm Standards (SAE J994B), and provide a minimum of 112 dbA.
BODY STRUCTURE:	Construction to meet or exceed FMVSS crash and rollover specifications. Three exterior rails at or near bottom of window line, seat cushion line and floor line. Body parts to be thoroughly rust proofed after fabrication. Headroom to be 73" or greater.(High Headroom as an option if not standard). Roof hatch and Egress to meet minimum FMVSS standards w/adjustable ventilation. Baked on Polyurethane paint. Aluminized interior panels below side windows. 16 gauge steel side-walls. Construction must meet or exceed FMVSS and the <u>National School Transportation Specifications & Procedures 2005</u> including the side intrusion test. Heavy-duty service package as an option.)
BUMPERS:	Front and Rear, Glossy Black
COLOR	National School bus Yellow. Bumpers and rails, glossy black. Hood may be flat black or glossy school bus yellow.
COWLING MATERIAL:	Fiberglass or equal. (may not be needed on all mfg. Bid according to mfg. recommendation)
CRASH PADS/BARRIERS:	Per FMVSS
DOORS:	All doors shall be equipped with padding at the top edge of each door opening. Padding shall be at least three inches wide and one inch thick and extend the full width of the door opening. All door hinges must be equipped with grease fittings or lubrication ports to facilitate PVM.
EMERGENCY DOORS AND EXITS	Latch buzzer for emergency doors, windows and roof hatches; center mounted inside and outside handles; Upper and lower panels of approved safety glass. Number and design of all emergency exits must meet FMVSS No. 72P or more: 2 roof hatches and 2 emergency windows each side). Exterior access handles on all emergency doors must include a 6" directional arrow showing direction of movement to release/open the door. Emergency Windows must be installed with vertical hinges. See ROOF HATCHES for additional emergency exit information. Thermopane or electrically heated glass on rear emergency doors as an option.
ENTRANCE:	4-Step (3-steps & the 4 th step is actually at the floor level inside of bus). Riser should be calculated by the mfg. consistent w/the related FMVSS, frame rail height and tire size. Heated step option.

ENTRANCE DOOR:	Air or electric operated with regulatory limiting valve. Two leaf, outward opening, with windows top and bottom. Entrance door windows to be thermo-pane standard. Door Actuator located such that the driver, when seated normally to operate the bus, does not have to fully extend reach or lean forward to open or close the door.
FLOORS:	Heavy Duty rubber covering, 16" ribbed tread on entrance steps, and 13" on aisles. Rear wheel houses and area under seats to be completely covered with smooth rubber mat. All seams to be bonded and smooth.
	SUB-FLOOR: 5/8 inch marine or equivalent plywood. (Premium grade exterior plywood acceptable) Plywood to be screwed to sub-floor with all exposed edges sealed.
FUEL TANK ACCESS:	Required, fill & pipe access, with spring loaded hinge and lock. Fuel tank sending unit access cover plate in bus floor
HEADROOM:	73 inches minimum. (Increased headroom option if not standard)
HEATER/DEFROSTER:	<p>Minimum 90,000 BTU heater at left front of driver's area. Minimum 50,000 BTU heater at right front of driver's area. Minimum 80,000 BTU in front of rear wheelhouse.</p> <p>Minimum 80,000 BTU at rear of rear wheelhouse. All heater cores to be copper tube coil design with aluminum fins. Heater shut-off valve shall be easily accessible from driver's seat; with additional shut-off valves in engine compartment. Coolant circulation booster pump shall be installed in feed line. Defroster channel shall run full length of windshield. Set of two (2) 6" overhead fans shall be provided to assist in both defrosting and cooling w/ installation not to restrict visibility. Heating system must be of sufficient capability to maintain the bus interior temperatures as specified in SAE test procedure J2233. System must include accessible bleeder valves appropriately placed in the return lines to remove air from the heater lines. (Auxiliary fuel-fired integrated heating/defrost and engine coolant pre-heat system as an option. Must meet all applicable FMVSS including FMVSS 301 and applicable SAE test procedures. Convection type heater for passenger compartment as an option.)</p> <p>Cabin Heat performance Minimum Standard: The heater and defrost system shall have the capability of providing evenly distributed heat and normal operating windshield defrost capability, creating a temperature rise to at least 50 degrees F. inside the body shell, within 20 minutes, after being soaked in an ambient temperature of 0 degrees F. for a continuous 15 hours. Performance certification by the manufacturer required.</p>
INSULATION:	Fiberglass 1-1/2" or Polyester or equivalent with a R factor of at least 5.75; fire resistant and UL approved. Sidewall, roof, front and rear quarter sections including roof bows. Insulate Driver's area. Insulation noise reduction with acoustical ceiling panels 1 st and 2 nd sections (full acoustical panels, full length of bus, as an option).

LETTERING:	5 inch local destination and as specified in the State of Maine Uniform Standards for School Buses (DOE rules, Chapter 81.)
LIGHTS:	<p>INSIDE: Passenger & Driver's Dome lights w/separate switch for driver's dome; step well light w/door, and light to mark Emergency Exit(s). NOTE: ADA Compliant walk & step well light to be wired to activate with entrance door control. Red ICC tell-tale lights over emergency door loading areas.</p> <p>BACK-UP, WARNING: standard 7" dual clear. If shape other than round, to be 38 square inches of lens surface.</p> <p>HEADLAMPS: Halogen standard. Daytime running lights standard with tail light interface.</p> <p>WARNING: 8-light system. (8- light Halogen, Strobe or LED light option; Roof mounted, flasher/strobe, front and/or rear, red or white as an option; Stop, tail and signal LED as an option). Operator activated manual override switch for 8-way lights, stop signal arm(s) and roof mounted strobe light (if present).</p>
MIRRORS:	<p>INSIDE: 6" x 30"; Rear View:</p> <p>OUTSIDE: 2 each left & right-heated rear view, mirrors. ALL mirrors per FMVSS #111. <u>All exterior mirrors heated as standard equipment.</u></p>
MUD FLAPS:	Front each wheel, and Rear: two, each full width of dual wheel/tire set.
PASSENGER CAPACITY:	Bid mfg. Equivalent within the 84P and above range . May offer reduced seating option with price reduction. May offer increased seat spacing option. Reduced seating and increased seat spacing options must not exceed FMVSS maximum seat spacing and barrier requirements.
RADIO:	AM/FM/STEREO/PA, Inside/Outside Speakers; One Antenna on Driver's Side with 6 interior roof-mounted speakers inside (flush mounting in ceiling). Dash-mounted, hand-held microphone. (Two-way radio option from dealer provided selection; Cell phone plug-in as an option).
RAILS:	Per State of Maine School Bus Standards (see Body Structure, above). (Snow rail as an option)
ROOF ESCAPE HATCH:	2 roof escape hatches standard . Min. 5 year warrantee for installation, workmanship, materials and leaks. Open-hatch warning buzzer as standard.
SAFETY EQUIPMENT:	<p>First Aid Kit, and BODY FLUID KIT</p> <p>Fire Extinguisher: 5 lb. min. dry type A-B-C Mounting/securement and signage to meet FMVSS and OSHA requirements as standard. (Second 5 lb. extinguisher as an option). Trash Basket and securement standard.</p> <p>Fire/evacuation blanket with storage bag standard (TieTech or equivalent); 1 belt cutter within reach of driver when seated in normal driving position, standard.</p>

SEATING: DRIVER: Bostrum or equivalent, deluxe, cloth fabric; AIR (bid self contained air if hydraulic brakes); HIGH BACK, with 8-way adjustable, seat belt with adjustable lap-shoulder, ERL type w/3-point hitch. PASSENGER: Forward facing, fully padded, 42 oz. Upholstery. Not less than 13” per passenger seat width, sidewall to aisle. Min. 12” aisle width per FMVSS.

SIGNAGE: Two inches wide by 8 inches high retro-reflective letters, front and rear school bus signs. 1.00 inch retro-reflective tape to outline rear door, school bus sign and rear windows. Two-inch retro-reflective stripe at top of floor level rub rail on each side of bus. District may request additional retro-reflective striping as an option not to exceed state or federal safety specifications and standards.

STOP SIGNAL ARM: One, driver controlled, hinged, swing-out type to meet FMVSS 131. Double faced, alternating flashing red lamps, one each mounted top and bottom of the stop sign. Sign(s) and lights automatically activate with the entrance door control. Manual override switch for stop arm and 8-way signal lights. (LED or Strobe type lights as options. 2nd sign as an option)

SUNVISOR: 6” x 30” see-through; adjustable to allow shading for the windshield and driver’s side window.

WARNING DEVICES: 3 Each roadside, triangular reflector type with secure on-board storage

WHEEL CHOCKS: 2 each with tie downs and secure on-board storage.

WINDOWS: Bids must meet or exceed State of Maine Uniform School Bus Standard & bid specifications. Only windshield shall be tinted. No side or door window tint options allowed.

WINDSHIELD: Standard flat, tinted (curved may be substituted if manufacturer’s standard for the vehicle offered.)

WIPERS: Both sides, electric, intermittent 2-speed, with separate switches preferred. Heavy Duty Motor(s), w/washers and arctic all weather blades. Single switch design is acceptable as manufacturer standard. (Heated as an option)

COMMENTS: _____

OPTIONS:**ITEMIZED PRICE FOR OPTIONS: (COST INSTALLED)**

AIR COMPRESSOR: Related Equipment for air options due to selection of hydraulic brake option.			\$__n/a__
AIR FILTER:	Dash-mounted Air Filter Minder		\$__
AXLE FRONT	Heavy duty option – specify capacity quoted.	FE/RE; 14,600#	\$__142.00__
AXLE, REAR:	Specify Capacity	FE; 23,000#	\$__600.00__
	Specify Capacity	RE; 23,000#	\$__included__
BATTERIES:	Heavy duty package (provide description)	3 batteries included	\$__0__
BRAKES:	Hydraulic Brakes (price deduction)		\$__
ENGINE:	Alternate Engine Options (Horsepower, Torque and Make/Model)		
	(Dealer to provide list with pricing).	FE/RE; 250hp/660 torque	\$__1,600.00__
EXHAUST SYS.	Left side exit	FE deduct	\$__<90.00>__
FUEL TANK	High Capacity Tank (Vendor state capacity offered)	100 gal	\$__300.00__
INSTRUMENTS:	Low oil indicator		\$__
RADIATOR:	Snap-on winter front	FE included	\$__0__
	Automatic Radiator Shutters (specify electric or hydraulic activated)		\$__
	Full on/Full off Fan	included	\$__0__
STEERING:	Tilt with telescoping column.	included	\$__0__
	(Note: Tilt/telescope option may be either manual or power activated. Please specify in price list.)		
SUSPENSION:	Air Ride Suspension	RE/FE front; 14,600#	\$__880.00__
TIRES:		RE/FE rear: 23,000#	\$__1380.00__
	REAR, mud & snow		\$__0__
	Spare Tire		\$__450.00__
	Spare Wheel		\$__100.00__

TRANSMISSION: Allison World PTS 3000 Transmission \$__4200.00_
 Manual Transmission (Please indicate # of forward speeds) \$_____
 Manual transmission price should indicate a deduction from base price with PTS2000 transmission.

BODY OPTIONS:

BODY CONSTRUCTION: Heavy-duty service package (include description of package) \$_____

CELL PHONE DASH PLUG IN **included** \$__0__

CHILD REMINDER SYSTEM: \$_____

COWL SKIRT PROTECTION: Chip Guard, Door Edge \$_____

DOOR, SERVICE: Heated Step Option \$_____

DOOR, EMERGENCY: Thermopane or electrically heated glass for rear emergency door \$_____

DOOR, EMERGENCY, SIDE: Open to 180 degrees \$_____

HEADROOM: High headroom **RE; included** \$_____

HEATER(s): Third Heater, 80,000 BTU as an option \$_____

Fuel fired, integrated heating/defrost and engine preheat system with timer \$__2000.00_

(Must utilize same fuel as engine, meet all applicable FMVSS and SAE Test procedures and, must exhaust in a way that does not allow emissions to enter the passenger compartment. Hot surface warning signage required for exhaust)

Convection Heater option \$__280.00__

INSULATION: Full acoustical ceiling panels \$__600.00__

LIGHTING: WARNING: Roof mounted front or rear red or white flashing **F & R roof** \$__325.00__

strobe with interlock control to passenger door

8 light system with Halogen lights \$_____

8 light system with LED lights **Strobing LED** \$__600.00__

8 light system with Strobe lights \$_____

	Stop, tail and signal LED lights		\$__125.00__
LIGHT MONITOR SYSTEM:	Eight light or sixteen light option		\$__160.00__
PASSENGER CAPACITY:	Reduced capacity option (quote price reduction per 39" seat removed)		\$_____
RADIO:	Two-way Radio	Various options; Call	\$_____
	Cell phone plug-in	Included	\$__0__
RAILS:	Snow Rail	Included	\$__0__
ROOF ESCAPE HATCH:	Additional Hatch option with open-hatch alarm; screened roof hatch		\$_____
SAFETY EQUIPMENT:	1 Additional 5# extinguisher (including hardware & installation)		\$_____
SEAT BELTS:	Non-automatic Retract Type Passenger lapbelt, for child seat securement, on seat belt ready seats only (per seat cost).		\$_____
NOTE: Seat Belt Option requires a per seat price of seat belt ready seats to allow installation of a limited number of child safety seats or infant seats on the bus. Federal guidelines encourage school districts to avoid seating students in the seat immediately behind a seat that is being used for these devices. ALL seat belt ready seats MUST be clearly identified.			
SEATING, PASSENGER:	High back,		\$__Standard__
	Seat Belt Ready Seats		\$__65.00__/_39" seat
	Integrated Child Passenger Seat (two drop down boosters with occupant harness).	CEWhite,	
	IMMI or equal		\$_____/seat
	CPS Latch system for school bus seats (installed)		\$_____/position
	School bus seat with two seating position lap/shoulder belts		\$_____/seat
Note: please state capacity impact caused by the installation of non-standard seats.			
	52 oz. Upholstery		\$_____
	Kevlar-Aramid, fire block & punch resistant		
	Upholstery or equivalent		\$_____
	Track, (3 parallel Tracks)		\$_____
	Track, (4 parallel Tracks)		\$_____
	Track, for Barriers (price per barrier)		\$_____
SECURITY LOCKS:	All doors, Front, Rear, and Side doors, and electrical panel/service doors		\$__275.00__
STOP SIGNAL ARM:	1 additional stop arm		\$__260.00__
	LED light package	LED Standard	\$__0__
	Strobe light package		\$__188.00__

STORAGE COMPARTMENT:	List options with security lock included	97" Side Mount	\$____775.00__
STORAGE RACKS:	Overhead racks. Must meet head protection requirements in FMVSS 222. Maximum Weight Capacity must be indicated on racks. <i><u>Racks must include luggage/storage securement system sufficient to retain 5 times static weight of the maximum rack contents capacity.</u></i>		\$_____
STUDENT CROSSING ARM:	Mounted on front bumper, operates with 8-lights system includes cut-out switch.		\$____375.00__
SUNVISOR:	6" x 18" Drivers side window		\$_____0__
SURVEILLANCE SYSTEM:	On-board passenger surveillance system (video tape or digital). Bid recommendation & provide price list.		\$_____
		Various Options; Call	
WHEEL CHAIR LIFT:	SEE NEXT PAGE FOR DETAIL SPECIFICATIONS See-through model option		\$_____
		Please Call	\$_____
WIPERS:	Heated option.		\$_____

OTHER:

MANUALS:	Full set of chassis, drive-train, body and electrical service manuals, priced per manual (may be in electronic format)	\$_____
WARRANTY:	Extended Warranty options for all chassis and body components	\$_____

LIFT SPECIFICATIONS

MUST BE ADA COMPLIANT AND INCLUDE MFG. RECOMMENDED REINFORCEMENT TO BODY PANELS, ROOF PANELS, ROOF BOWS AND FLOORS/FRAMING. MUST MEET ALL APPLICABLE FMVSS and ADA STANDARDS.

A. Lifting mechanism must:

1. Must be able to lift a minimum load of eight hundred (800) pounds.
2. Bus must have battery reserve capacity that when the bus engine is off, the system will sustain the electrical demand of the lift through four (4) complete full-load cycles and then re-start the bus engine.
3. Be located on the right side center or front of the bus body and include associated emergency door requirements per Fed. Motor Vehicle Safety Standards.(May be located in the right rear section per district request. Please show price differential if any in your pricing package).
4. Have manual controls in the event of a power failure.
5. Not permit the platform to fall if the power fails while the lift is in operation.
6. Have controls that enable the operator to activate the lift while standing on the platform and from inside or outside the bus.
7. Have a circuit breaker, fuse or equivalent overload protection connecting the lift motor to the power source.
8. Have limit switches or by-pass valves to prevent excess pressure from building in the hydraulic system when the platform is upright or extended.

B. Power Lift Must:

1. Have a clear horizontal opening and platform large enough to accommodate a thirty (30) inch wide wheelchair on the bus.
2. Be confined within the perimeter of the bus body when not in use.
3. Mechanically lock when the lift is in the upright position by means other than a support or lug on the door.
4. Move smoothly and rest solidly on the ground when fully lowered.
5. Have sides at least one (1) and one-half (1-1/2) inches high, on the platform.

6. Be designed to prevent the operator from being entangled in the lift during raising and lowering of the platform.
7. Have a skid-resistant platform surface.
8. Have a self-adjusting skid-resistant inclined plate on the outer edge to facilitate movement from the ground to the platform.
9. Have padding on the crossbar on the top of the lift, if the lift is equipped with a crossbar.
10. Wheelchair Tie down system – mfg. Recommended system. MUST be ADA compliant & meet all related FMVSS. Storage pouch and securement for all tie down equipment when not in use. Price both manual and auto-retract tie downs.
11. Three point shoulder and lap restraint system for each wheel chair position. Storage pouch and securement for all restraint system components when not in use.
12. Must include full set of operating and maintenance manuals for lift and securement systems.
13. Include see through option for lifts.

NOTE: Wheelchair securement and tie-down devices MUST be provided and will meet all applicable FMVSS. Secure storage must be provided for all tie down and passenger restraint equipment for storage when equipment is not in use. Bid may include additional related equipment as recommended by the manufacturer.